the Response filed September 8, 1999. The Examiner withdrew the rejection under 35 U.S.C. §112. The Examiner then rejected claims 1-44 under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 5,779,562 to *Melvin et al.* or U.S. Patent No. 5,813,923 to *Cavallaro et al.* each in view of U.S. Patent No. 4,762,322 to *Molitor et al.*

Applicants appreciate the Examiner's thorough review of the present application. Applicants herein present clarifying amendments and remarks and respectfully submit that claims 1-44 are in condition for allowance.

## I. The Specification

In the Office Action, the Examiner did not enter the amendments to the specification from applicants' last responses. Applicants herein respectfully submit Figures 4 and 5 provide the necesary support for the amendments to the specification. As can be shown on Figure 4, the isocyanate circulates through the heat exchange via lines **86** and **89**, and not **84**. Figure 5 shows that the cooling lines **140** in the bottom mold **124** is represented by **140**, and not by **128**.

## II. The Examiner's Rejection of Claims 1-44 Under 35 U.S.C. §103(a) as Being Unpatentable Over *Melvin* or *Cavallaro* Each in View of *Molitor* Has Been Overcome

The Examiner rejected claims 1-44 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,779,562 to *Melvin et al.* or U.S. Patent No. 5,813,923 to *Cavallaro et al.* each in view of U.S. Patent No. 4,762,322 to *Molitor et al.*

First, the Examiner asserted that "it would have been obvious to one of ordinary skill in the art to form the outer polyurethane covers of *Melvin et al.* and *Cavallaro et al.* by reaction injection molding method in order to take advantage of the known benefits of the method. Note column 3, lines 12-23 of *Molitor et al.* which detailed these advantages (i.e. low density high strength to weight ratio)."

The Examiner then asserted that one skilled in the art would combine the teachings of primary references *Melvin* or *Cavallaro*, which teach a golf ball comprising a polyurethane cover layer, with secondary reference *Molitor*, which teaches a golf club formed from reaction injection molding ("the RIM process"). The Examiner justified the combining of primary reference *Melvin* or *Cavallaro* with secondary reference *Molitor* by asserting that "all references are directed to sports articles which utilize polyurethane

outer covers."

Next, the Examiner indicated that *Cavallaro* and *Melvin* each teach that the outer layer may be injection or compression molded. The Examiner asserted that since *Cavallaro* and *Melvin* state that the outer layer may be injection or compression molded, it would have been obvious to one of ordinary skill in the art to utilize the RIM process instead of injection molding to form the outer polyurethane layer.

Finally, the Examiner cited column 5, lines 18-21 of *Molitor* which specifically states that the RIM process is a "well-known technique."

Independent claims 1, 38, and 40 recite a process of making a multi-piece golf ball. Independent claims 14, 42, and 44 recite a golf ball.

Primary references *Melvin* and *Cavallaro* teach a golf ball comprising polyurethane. Neither *Melvin* nor *Cavallaro* teach or suggest the use of a RIM process in order to form the golf ball. Instead, these patents describe injection or compression molding techniques. Secondary reference *Molitor* notes a RIM process to form **golf clubs**. The Examiner asserts that it would be obvious to combine either of the primary references relating to golf balls with a secondary reference that is directed to a golf club. This theory fails for several reasons. First, although clubs and balls may both be sports articles, these items are significantly different from one another. And, the methods for their manufacture are also dramatically different. Second, there is no motivation to combine this collection of references, and particularly, no motivation to select using a RIM process rather than the injection or compression molding processes taught by *Cavallaro* and *Melvin*. In fact, if one followed the teachings of the primary references *Cavallaro* and *Melvin*, one would be motivated to utilize an injection or compression molding technique. The only motivation to use a RIM process for forming a golf ball component stems from the pending claims themselves! In other words, the present rejection is based on improper hindsight reconstruction. That is, the collection of cited references was arrived at only after considering the subject matter recited in the pending claims.

The Examiner attempts to reconcile the significant differences between the primary references and the secondary reference in three ways. First, the Examiner asserts that one skilled in the art would combine the references because they deal with sports articles. Second, the Examiner asserts that one skilled in the art would be

motivated to combine the secondary reference with the primary references due to providing desired resiliency in the golf balls of the primary references. Third, the Examiner cites column 3, lines 12-23 of secondary reference *Molitor* to show that the advantages (i.e. low density and high strength to weight ratio) are the advantages sought in the primary references.

Primary references *Melvin* and *Cavallaro* neither teach, suggest, nor provide any motivation to consider using methods of forming a golf club as taught in secondary reference *Molitor*. Alternatively, secondary reference *Molitor* neither teaches, suggests, nor provides any motivation for the use of its method to form a golf club in forming other products such as golf balls. The fact that the Examiner's cited references can each be generally classified as "sports articles" does not mean that there is motivation to combine primary references *Cavallaro* or *Melvin* with secondary reference *Molitor*.

Furthermore, the advantages of resiliency, low density, and high strength-to-weight ratio taught in secondary reference *Molitor* do not necessarily relate to the RIM process. Such characteristics are also related to the polyurethane itself.

Applicants respectfully submit that the Examiner's assertion that since compression or injection molding is taught to form a layer on a golf ball, it would be obvious to also use a RIM process to form a layer on a golf ball is erroneous. Secondary reference *Molitor*, which describes a RIM process in manufacturing golf clubs, was issued in 1988. The parent application to primary reference *Melvin* was not filed until almost five years later in 1993, while the parent to primary reference *Cavallaro* was not filed until almost eight years later in 1996. In other words, the RIM process described in *Molitor* was known and publicly available at the time the *Cavallaro* and *Melvin* patents were filed. Yet, neither *Cavallaro* nor *Melvin* describe a RIM process for golf balls even though they both teach other methods such as injection or compression molding. Therefore, the Examiner's assertion that the teaching of compression or injection molding in the primary references would suggest or motivate one skilled in the art to use a RIM process is wrong because the RIM process was known at the time of the *Cavallaro* and *Melvin* patent application filings, but the RIM process was not adopted by *Cavallaro* or *Melvin*. Moreover, the Examiner's assumption that injection molding and the RIM process are basically the same processes is incorrect because the

processes involve significantly different molding steps.

Finally, the Examiner cites column 5, lines 18-21 of secondary reference *Molitor* for the proposition that the RIM process is a "well-known technique." Again, if the RIM process described in *Molitor* was such a well-known technique, then surely *Melvin* or *Cavallaro*, which were filed years after *Molitor* was issued, would have included the RIM process. However, neither primary reference *Melvin* nor *Cavallaro* teach or suggest any method other than injection molding or compression molding.

Applicants respectfully submit that new or unexpected results are not required in the present application when there is no motivation to combine primary references *Cavallaro* or *Melvin* with secondary reference *Molitor*. *See Panduit Corp. v. Dennison Mfg. Co.*, 810 F.2d 1561 (Fed. Cir. 1987) (no requirement that claimed invention attain "unexpected result" before conclusion of nonobviousness may be reached).

Therefore, applicants respectfully submit that claims 1-44 are not obvious over primary references *Melvin* or *Cavallaro* either in view of *Molitor*.

## CONCLUSION

In view of the foregoing, applicants submit that claims 1-44 are in condition for allowance. Applicants respectfully request early notification of such allowance.

Respectfully submitted,

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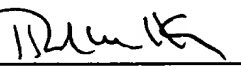

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